

- 15 -

13617ID Ahmadi

DUALTONE MULTI FREQUENCY SIGNAL DETECTION

5

ABSTRACT

10 A signalling tone detector for use in a communications network for the  
detection of dual frequency multi-tone (DTMF) pairs of signal tones in a time  
division multiplex (TDM) signal. The detector comprises first and second arrays of  
adaptive notch filters corresponding to the rows and columns of a subscriber's  
pushbutton key set. Each said notch filter responds to a respective signal tone by  
15 the generation of a corresponding output signal. A logic circuit identifies from a  
combination of output signals from the adaptive notch filters the presence or  
absence of a pair of signal tones and, when the presence of a pair of signal tones  
has been identified, for decodes that pair of tones to corresponding digit  
information. The detector is used in an arrangement for compressing and  
20 packetising TDM traffic for transport over a connectionless network. To prevent  
distortion, the DTMF tones are decoded to digit information prior to transport over  
the connectionless network.

0076620 029260